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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION N
10/086,860	03/04/2002	Robert P. Carmichael	10547-005/HRH	4309
1059	7590	10/06/2004	EXAMINER	
BERESKIN AND PARR SCOTIA PLAZA 40 KING STREET WEST-SUITE 4000 BOX 401 TORONTO, ON M5H 3Y2 CANADA			BUMGARNER, MELBA N	
			ART UNIT	PAPER NUMBER
			3732	
DATE MAILED: 10/06/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/086,860	CARMICHAEL ET AL.	
	Examiner	Art Unit	
	Melba Bumgarner	3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Day (5,947,735). Day discloses a dental implant 10 comprising a body portion 20 and a head portion 16, the body portion comprising a tip portion 12 remote from the head portion, a lead thread portion adjacent the tip portion, an intermediate thread portion adjacent the lead thread portion and a distal thread portion adjacent the head portion, the tip portion comprises at least one cutting edge 28 and the body portion comprising at least one flute 26 having a first end adjacent the at least one cutting edge (figure 1), the body portion having an axis and the cutting edge extending radially outwardly from the axis so that upon rotation of the implant in the jaw, the implant is self-drilling and self-tapping (column 3 line 65). The implant further comprising a central bore within the head portion and a thread within the bore is disclosed as the form of typical dental implant for receiving an abutment (column 1 line 16). As to claim 2, the body portion has a general longitudinal axis and comprises an outer surface and the at least one flute extends along the outer surface in a direction substantially parallel to the axis. As to claims 3 and 4, the implant comprises at least two cutting edges and at least two flutes (column 3 line 59). As to claim 5, the flute extends from the tip portion along the lead thread portion and the intermediate thread portion. As to claim 6, the flute has a distal end and the distal end is adjacent a proximal

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end of the distal thread portion. As to claim 7, the flute has a flute surface and the surface is roughened (column 4 line 25). As to claim 8, the surface of the lead thread portion and the surface of the intermediate thread portion are smooth (column 4 line 22). As to claim 9, the lead thread portion comprises a thread having at least three revolutions.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Day in view of Beaty et al. (5,727,943). Day discloses a dental implant that shows the limitations as described above; however, Day does not show the thread having a crest and a crest line joining the crest of the three revolutions extends radially outwardly, distally, relative to the longitudinal axis. Beaty et al. teach a dental implant having the thread of the lead thread portion having a crest and a crest line joining the crest of three revolutions extends radially outwardly, distally, relative to the longitudinal axis (figures 1,3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the crest line of Day as in Beaty et al. in order to provide friction-reducing structure in view of Beaty et al. As to claim 11, Day and Beaty et al. show a crest line joining the crest of the thread of the intermediate thread portion and the distal thread portion is substantially parallel to the axis. As to claim 12, Beaty et al. show a root line extending through the root of the thread of the intermediate and distal portions is parallel to the axis and displaced from the axis a root distance and the cutting edge extends from

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the axis radially outwardly to a respective cutting edge end, which is displaced from the axis a cutting edge distance, wherein the root distance is greater than the cutting edge distance. Since the tip portion of the implant comprises the cutting edge and the lead thread portion of Beaty et al. is "tapered", the cutting edge end would have a cutting edge distance from the axis that is smaller than the root distance. As to claims 13 and 14, Beaty et al do not show a ratio of the root distance and the cutting edge distance. Although, it appears like the difference is not greater than one third of the root distance, it would have been an obvious matter of choice to one having ordinary skill in the art at the time the invention was made as to the specific ratio or percentage difference of the distances. The difference in these distances is not disclosed as critical to the claimed invention, in fact the specification states that the difference in distances establishes the amount of compression the surface of the bone will be subjected to, which in turn is determined by the density of the bone.

Response to Arguments

5. Applicant's arguments with respect to the rejected claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melba Bumgarner whose telephone number is 703-305-0740. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached at (703) 308-2582. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Melba Bumgarner
Patent Examiner